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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/464,253 | 12/16/1999 | LOUIS CENTOFANTI | 16715-0121 | 7296 |

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JOHN S. PRATT
KILPATRICK STOCKTON LLP
1100 PEACHTREE
SUITE 2800
ATLANTA, GA 30309

| EXAMINER |
|---|
| JOHNSON, EDWARD M |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1754 | |

DATE MAILED: 01/27/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/464,253 | CENTOFANTI ET AL. | |
| | Examiner | Art Unit | |
| | Edward M. Johnson | 1754 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *04 November 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen 5,551,976.

Regarding claims 1, 12, 22, and 30, Allen '976 discloses a method for the disposal of radioactive waste (see column 1, lines 12-16) comprising: admixing a polymer (see column 5, lines 14-20) with the waste material to encapsulate the waste within the polymer (see column 4, lines 7-13) wherein the polymer prevents radiation from passing through (see column 4, lines 60-62), further mixing the polymer-waste admixture with a shielding material wherein the polymer-waste mixture is incorporated within the shielding material (see abstract and column 2, lines 50-55), and forming the final mixture into solidified, round geometric shapes (which inherently have a high volume per unit

surface area compared to thin sheets or rods) to further improve overall performance (see column 3, lines 63-67).

Allen '976 fails to disclose alpha particles.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to prevent alpha particle radiation emissions because Allen '976 discloses the disposal of radioactive waste (see column 1, lines 12-16) wherein the polymer prevents radiation from passing through (see column 4, lines 60-62), which one of ordinary skill would reasonably interpret as all radioactive waste emissions, including alpha particle radiation, rather than all radioactive wasted except alpha particle radiation.

Regarding claims 2, 13 and 23, Allen '976 discloses the radioactive material as radon (see column 9, line 67).

Regarding claims 3, 19, and 24, Allen '976 discloses the polymer selected from mineral oil, charcoal, activated carbon, silicates, sulfur, organic polymers or inorganic polymers (see column 5, lines 14-20; column 6, lines 34-56).

Regarding claims 4, 20, and 25, Allen '976 discloses the polymer added in an amount from about 0.1 to about 30 percent by weight based on the amount of waste material (see column 6, lines 14-33).

Regarding claims 5, 11, 17, 21, and 29, Allen '976 discloses disposal by sealing the polymer/waste material in molded forms, such as blocks stored in landfills (see column 2, lines 2-3).

Regarding claims 6, 7, 15, 16, 26 Allen '976 discloses mixing the polymer and waste material with a shielding material such that the polymer-waste material is incorporated with the shielding material, by mixing it with concrete (see abstract and column 2, lines 50-67).

Regarding claims 8 and 27, Allen '976 discloses the amount of shielding material in a ratio from about 2 to 1 (see column 6, lines 24-33; up to about 60 percent concrete).

Regarding claims 9, 10, 14, and 28, Allen '976 discloses a geometric shape with a high volume per unit surface area selected from a substantially spherical or cubic shape to further improve overall performance (see column 3, lines 63-67).

Regarding claim 18, Allen '976 discloses mixing the polymer with the waste material to encapsulate the radioactive material to prevent radiation from passing through (see column 4, lines 7-13 and column 2, lines 57-60).

***Response to Arguments***

3. Applicant's arguments filed 11/4/02 have been fully considered but they are not persuasive.

The objection and rejection under 35 USC 112(2) have been withdrawn in view of Applicant's amendment.

It is argued that it is the invention as a whole that must be considered under 35 U.S.C. §103. This is not persuasive because it is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to prevent alpha particle radiation emissions because Allen '976 discloses the disposal of radioactive waste (see column 1, lines 12-16) wherein the polymer prevents radiation from passing through (see column 4, lines 60-62), which one of ordinary skill would reasonably interpret as all radioactive waste emissions, including alpha particle radiation, rather than all radioactive wasted except alpha particle radiation.

It is argued that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose. This is not persuasive because, contrary to Applicant's suggestion, prevention of all radiation emission, as disclosed, is not "unsatisfactory" for prevention of alpha radiation emission. Applicant asserts that the cited prior art would "fail to prevent emissions". However, Allen '976 discloses the disposal of radioactive waste (see column 1, lines 12-16) wherein the polymer prevents radiation from passing through (see column 4, lines 60-62).

It is argued that to establish prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. This is not persuasive because Applicant merely claims encapsulation with a polymer, which is disclosed in the cited reference. No specific polymer that would distinguish the claimed polymer from the prior art polymer is claimed. It is noted that the features upon which applicant relies (i.e., a polymer other than a "superplasticizer") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is argued that it is respectfully submitted, as noted above, to establish prima-facie obviousness of a claimed invention. This is not persuasive because Applicant appears to admit that Allen discloses storage of radioactive waste in molded forms, which is a "further treatment", contrary to Applicant's apparent suggestion.

It is argued further that the dependent claims are allowable in light of previous remarks. This is not persuasive because the claims from which they depend are not allowed.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ
January 13, 2003